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AUTHOR Spenner, Kenneth I; Otto, Luther B.
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ABSTRACT

In this paper the authors attempt to explain and sharpen unresolved issues and questions that have evolved in the study of careers, especially since the concept of "careers" has received increased theoretical and empirical attention across disciplines. The issues discussed involve (1) conceptualization and measurement of careers; (2) dimensions of jobs and careers; (3) structural and person-level predictors of career phenomena; and (4) life course dimensions and the age-time specificity of relationships. Building on earlier research by Seymour Spilerman, the authors introduce their conceptualization and measurement of career lines. (Career lines are described as empirically linked sequences of jobs formed by institutional and labor market structure.) They discuss the theoretical methodological, and data requirements for further informing the understanding of career development. (Author/BM)

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EMERGING ISSUES IN THE STUDY OF CAREERS*

Kenneth I. Spenner and Luther B. Otto

Boys Town Center

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ABSTRACT

The concept "careers" appears in various literatures and is currently receiving increased theoretical and empirical attention across disciplines. In this paper we advance the emerging dialogue on unresolved issues attending the study of careers. The issues involve conceptualization and measurement of careers, dimensions of jobs and careers, structural and person level predictors of career phenomena, and life course dimensions and the age-time specificity of relationships. Building on earlier work by Spilerman, we introduce our conceptualization and measurement of career lines. We discuss the theoretical, methodological, and data requirements for further informing the understanding of career development.

Career has been an appealing concept to a number of disciplines and recent research reveals a renewed interest in the topic. In this paper we outline several emerging issues that surface from the review of this literature. The issues involve: (1) concepts and measures for career; (2) dimensions and social organization of jobs and careers; and (3) explanations for career phenomena. The first two correspond to issues of concept and method for the dependent variable; the third frames issues concerning independent variables or explanatory phenomena. In sum, we define our task as elucidating and sharpening unresolved issues and questions in the study of careers. Our positions and answers are best viewed as speculative and provisional.

A) CONCEPTS AND MEASURES FOR CAREER

Although the various literatures of the past quarter century are replete with references to "careers," there has been little agreement on the meaning of the concept. Slocum (1975:5), for example, asserts that an occupational career may be defined as "an orderly sequence of developments extending over a period of years and involving

progressively more responsible roles within an occupation." Hall (1975:267-8) states that "a 'normal' career . . . is generally a normal progression that carries with it not only a higher income over a period of time but also some prestige, which accrues with the status of having seniority or tenure, being experienced, being an old-timer, and so on." A recent theory of careers (Sorensen, 1974, 1975, 1977; see also, Hudis and Kalleberg, 1977) uses the job shift as the basic datum for analysis and thereby excludes from having careers those individuals who remain in the same job or occupation over time. (In fairness to the authors, the restriction is more one of available data than idea but the effect is nonetheless the same.) A more typical approach is Temme's (1975) discussion of "work," "jobs," "occupations," and "careers," which provides reasonably specific definitions of the former but leaves a precise meaning of careers unattended.

Spilerman (1977) observes that the key themes around which past studies are organized focus on preparation for work, securing entrance into occupations, remuneration and rewards, mobility, occupational associations and phasing into retirement. He criticizes the literature for selectively studying careers-- e.g., orderly careers-- and for being preoccupied with case histories of individual occupations, firms or industries to the neglect of careers that cross institutional boundaries. He notes that the empirical description of careers has not

been entirely neglected (see Lipset and Bendix, 1952a; 1952b; Palmer, 1954; Spilerman and Miller, 1973; Sorensen, 1974, 1975, 1977; Parnes and Nestel, 1974; Form and Miller, 1949; Wilensky, 1961; and Thompson, Avery and Carlson, 1968). Nonetheless, over the past quarter century career studies have largely deferred to the study of status and earnings change as these have been formulated in socioeconomic attainment models. This is not to belittle that tradition or its contribution to our understanding of stratification and inequality in industrial societies. However, it is to acknowledge a growing consensus to move beyond that era of research to the next level of issues and elaboration. Evidence of that movement is quite apparent in recent years.

Apart from Spilerman's (1977) recent effort, there have been few attempts to type and systematically describe the variety of career lines in the labor market on the basis of empirical data. Moreover, to foreshadow our comments below, there has been little effort to describe the multi-dimensional characteristics of careers or to predict and explain the differential accessibility to careers within and between populations.

The lessons and limits of the past point to several necessary features of a definition and concept of career that informs our research. First,

the concept should embrace consideration of the entire labor force, not just a single occupation, firm, or class of workers. Second, the concept should incorporate a dimension of age that allows statements about work histories as experienced by individuals or as generated by societal structures. Third, the concept should be sensitive to a variety of institutional structures around which work roles vary (e.g., occupation, industry, firms, labor markets) rather than grant exclusive priority to any single institutional axis. Fourth, the concept should provide for an examination of various features of work roles, not only their job status or economic remuneration. Fifth, the concept should avoid the evaluative trappings of past definitions that often assume that careers denote upward social mobility to the exclusion of other types of career lines. Finally, the definition, conceptualization, and analytical treatment of careers should be based on detailed (disaggregated) levels of empirically verified work histories of men and women.

The recent statement by Spilerman (1977) provides some of the elements necessary for such a definition and informs our own perspective. Career line is defined as a work history or sequence of jobs that is common to a portion of the labor force (career referring to an individual's job history) (Spilerman, 1977:551). This concept assumes that labor markets are patterned and that determinable regularities in job sequences exist

that define patterns of job movement and stability for significant numbers of workers. Career lines have identifiable sets of work-related consequences for their incumbents. Further, there are rules that govern access to career lines through a limited number of jobs. Following earlier leads of Kerr (1954) and dual labor market economists (Doeringer and Piore, 1971; see also Althauser and Kalleberg, 1977), Spilerman refers to these jobs as "ports of entry" (or entry portals). Career lines, then, are structural features of the labor market and are subject to the formative influences of industries, firms, and occupations. Treating career lines as empirically linked sequences of jobs formed by institutional and labor market structures goes beyond traditions in economics (human capital), sociology (status attainment) and psychology (trait-factor) that give only selective attention to job linkages (e.g., occupation or industry based lifetime earnings profiles) (but see Featherman, 1971; 1973; Kelley, 1973).

We think the concept has promise. It is descriptive rather than prescriptive, and theoretically includes the entire labor force. It is sensitive to structural and individual sources of variation. Finally, the concept provides for age variation and allows disaggregated empirical studies.

Several recent conceptual and empirical studies draw on notions of careers and career lines in a way consistent with Spilerman's groundwork. Thus, the general model for intragenerational mobility proposed by Sorensen (1974, 1975, 1977; see also Hudis and Kalleberg, 1977) defines career as a sequence of jobs held by the individual. In this study, careers are measured by an individual's succession of job shifts. Moreover, the structural model incorporates a system level parameter for growth in opportunities along with individual resource variables. The theoretical typology of labor markets proposed by Althauser and Kalleberg (1977) incorporates ports of entry and job ladders as central components of certain types of labor markets. A recent study by Rosenbaum (1977) examines twelve year panel data from a single organization to form career trees (sets of career lines) from individuals' job histories. Finally, some of our own work in progress (Otto, Call and Spenner, 1978) studies entry into careers drawing from some of Spilerman's ideas, using synthetic cohort analyses of 1970 Census data and twelve year job histories from a statewide panel cohort of 6800 individuals. This research aims at investigating the usefulness of cross-sectional census data to measure career lines. The individual job histories will be used to validate the lines estimated with cross-sectional data, and will also serve as a data source with individual panel measures.

Spilerman's (1977) conceptualization of career lines seems to us to be both reasonable and provocative; yet it also has the limitations of a first approximation. We limit ourselves to two issues that require attention.

First, measures and operations for this concept of career lines are problematic. Spilerman suggests a synthetic cohort strategy that has inherent limiting assumptions. Second, the career line concept does not give explicit treatment to the dimensions or the social organization of the dimensions of jobs and careers. We treat issues concerning synthetic cohort analysis below. We discuss the dimensions and the social organization of the dimensions of jobs and careers in the next section.

The measurement of career lines refers to the empirical identification of the age-graded sequences of jobs that are common in the labor force. Since the concept career line embodies a statistical notion of relatively frequent, age-specific job transitions, the ideal data set would include complete job histories spanning the life course of the sample. As the concept is sensitive to different institutional arenas, the histories should contain occupation, industry and firm information, and the dates of job transitions. Finally, the classification of jobs,

hence the detail of career lines, should be at as homogeneous and disaggregated a level as possible. (We ignore the confounding of age, period, and cohort effects for the moment.)

Two approaches are available to measure career lines: a synthetic cohort strategy using cross-sectional data, and longitudinal job history analysis based on from one or more birth cohorts of individuals. In reality, neither approach meets the requirements of the ideal data set we sketched above.

Consider the synthetic cohort strategy. A "synthetic cohort" takes age-graded "snapshots" of labor force transitions at one point in time. By stringing together consecutive snapshots--treating the destination of one group as the origin for the next oldest group--a synthetic version of the true career line can be estimated under simplifying assumptions. The 1970 census 5% questionnaire provides such a data base. Respondents reported their current job (1970) and the job that they held five years prior (1965). Suppose the level of disaggregation for jobs is about four hundred 1970 census occupation-industry categories. Additionally, assume an array of 5-year job transitions by eight 5-year age cohorts ($400 \times 400 \times 8$) to form the total matrix of transition probabilities for the synthetic cohort. The resulting data cube includes 1.28 million

cells. Statistical inference (i.e., the number of cases required to constitute transition probabilities) immediately surfaces as a major issue since, by definition, career lines are those patterns of movement common to a portion of the labor force. Only the largest of census samples permits this kind of estimation.

Our analyses of a 3% Public Use Sample from the 1970 census (n=1.8 million respondents with adequate occupation-industry information) demonstrates that the large majority of cells in the data cube are empty. Only 14% of the cells with highest density on the diagonal plane of the data cube contain all job transitions of those aged 18-62.

The main disadvantages of the synthetic cohort strategy include: (a) Markov-like assumptions about irrelevance of the history of a worker's jobs (i.e., no history other than that which flows through the previous point-in-time job enters the estimation of transition probabilities; see Mayer, 1972; Rosenbaum, 1978; and Spilerman, 1977); and (b) the possible confounding of marginal changes in the occupational structure (growth and decline in job opportunities) with age variations in transition probabilities (for further discussion, see Otto, Call and Spenner, 1978, Appendix I). Yet the synthetic cohort strategy with large cross-sectional samples represents the only available option for

estimating a large variety of career lines for the American labor force. The challenge lies in learning the limits of the strategy and improving it.

The longitudinal job history strategy has the obvious advantage of containing the complete job histories of individuals (see Rosenbaum, 1978; Gitelman, 1966). When used in conjunction with stochastic modelling techniques (Mayer, 1972; Stewman, 1975; Tuma, 1976) individual job histories permit assessing the distortion inherent in synthetic cohort models. Unfortunately, few bodies of data contain the necessary histories. Of those that do, the data are usually restricted to a single firm, or set of industries, restricting the estimation to a few career lines. For example, Rosenbaum (1978), in an important recent paper, generates a career tree for new employees entering a single firm in the same year. Five job categories (occupation groups) and five time points over a 13-year history are used. The full sample of 13,000+ employees produced a subsample of 671 individuals for the tree in question, which contains about 25 distinct career lines. Even at this extreme level of aggregation, many of the "lines" are based on the job histories of but 1, 2 or 3 people.

Finally, longitudinal data likely will refer to a labor market of twenty or more years ago that may not accurately characterize career entry for current cohorts (i.e., effects of inflation, migration, growth or decline in opportunities).

In summary, recent literature, most notably the work by Spilerman, shows movement toward a new set of concepts to describe careers. The concepts include the notions of career line or the age marked strings of jobs that are common in the labor force, and ports of entry or age-specific positions that grant access to a line. In contrast to the past, these concepts are more inclusive and less prescriptive as to what careers are and how they operate. As concepts, they are more amenable to studying the institutional forces in society that shape and define career paths.

The primary measurement strategies involve analysis of cross-sectional synthetic cohorts and longitudinal job histories. Both have inherent limitations. The shortcomings of each approach will require the complementary use of the other in future research.

B) THE DIMENSIONS OF JOBS AND CAREERS

The dimensions of jobs refers to the features of work roles by which jobs are differentiated. The central issues can be framed by several questions. What dimensions of jobs are important over the careers of individuals? What is the relationship between dimensions, how do societal structures generate these relationships, and how might they be changing? More generally, how is work organized into jobs, occupations, industries, and career lines (see Davis and Taylor, 1976; Braverman, 1974)?

In certain respects these are classic questions (a la Marx, Durkheim, and Weber). For select areas of investigation the answers have been provided by the workings of normal science. For example, in Marxist studies of the class structure (Parkin, 1973; Giddens, 1973; Wright and Perrone, 1977) unit relationships of control over production prevail as paramount dimensions of the social organization of work. In studies of status attainment and mobility, socioeconomic status, as concept and as measurement metric, is the major stratification dimension (Klatzky and Hodge, 1971; Featherman and Hauser, 1977). And the effects of occupational role on psychological orientation show the prominence of occupational self direction as the organizing dimension (Kohn, 1969; Kohn and Schooler, 1978; Miller, Kohn, Schooler and Miller, 1978).

We submit that identifying the appropriate dimensions of jobs and careers is an issue that has not been resolved and demands high priority on the research agenda. The more general concepts and measures such as socioeconomic status and prestige inform the study of stratification and inter-generational status transmission but do not provide the necessary detail for analyzing the dynamics of intragenerational job choices and shifts. Dimensionality and social organization of jobs is important because the understanding, definition and mixture of individual definitions of costs and rewards likely varies as a function of age, other role responsibilities (i.e., to family), and career line location. Moreover, the dimensions and mix of job features specific to certain classes of career lines are in some measure organized by their dual and segmented labor market location (Doeringer and Piore, 1971; Althausen and Kalleberg, 1977; Kalleberg and Sorensen, forthcoming).

Where do we go from here in addressing the challenge to identify the appropriate dimensions of jobs and careers? Several recent studies provide a beginning, but also perhaps raise more questions than they resolve. We identify the major efforts and focus on the unresolved questions.

The program of research by Kohn and colleagues (Kohn, 1969; Kohn and Schooler, 1973; 1978; Miller, et al., 1978) provides the most sustained and systematic sociological program of research that examines a large array of detailed job characteristics. Using size of effects of occupational conditions on psychological functioning as the criterion, controlling for job status, they find the largest net effects for occupational self-direction variables: substantive complexity of work, routinization and closeness of supervision. From this and other research (Temme, 1975; Spenner, 1977) we know the colinearity between indicators for these constructs and socioeconomic status is quite high, in many cases exceeding $r = .75$.

We ask: what does it mean, how does it affect our understanding of the dimensionality and structure of jobs, if the effects of occupational conditions on psychological functioning are estimated controlling on job status, a la the Kohn (Kohn and Schooler, 1973) analytical strategy? We submit that if the concepts and measures of status are indicators of the overall socioeconomic resources (i.e., education and income) and are measures of the "desirability" of the job (Goldthorpe and Hope, 1974:3-16), then the more disaggregated indicators are part of that whole, and in fact either generate or reflect the overall level of resources as measured by status. In either case, lacking a theory of the dimensionality and structure of jobs, the relationship of the part

to the whole remains undefined. Indeed, even the definition of what is "part" and what is "whole" is problematic. We wonder aloud whether controlling for status when estimating the effects of job conditions is to remove some of the covariation that is of interest. To grant equal conceptual status to the overall indicator of resources and to the subcomponents of roles that constitute that overall resource level results in very serious colinearity problems when, for example, one attempts to separate the effects of "status" from those of "complexity."

To summarize, in our judgment one unresolved issue concerning the dimensionality and social organization of jobs and careers is the conceptual status of such overall constructs and measures as prestige and socioeconomic status in relation to more disaggregated job characteristics, however specified.

Other recent studies draw upon both inductive and deductive strategies in generating dimensions for jobs from a large array of job characteristics. Temme (1975), in a conceptual and empirical treatment of occupation, and Spenner (1977), in a study of the intergenerational transmission of the components of jobs, use a tripartite conception of labor force positions: requirements (requisites), routines (job content), and rewards. Bielby and Kalleberg (1975) and to a lesser

extent Mortimer (1974) inductively arrive at related dimensions (requirements, resources, and rewards, and work autonomy, functional foci, and characteristic rewards, respectively). Yet other studies, also using inductive and deductive strategies, arrive at other dimensions for jobs: Spaeth (1978), three highly correlated vertical dimensions (prestige, authority and complexity); Kalleberg (1977), six dimensions in a theory of work values and job satisfaction; and Vanneman and McNamee (1978), three dimensions in their study of labor force characteristics and job rewards.

These studies raise several issues. First, consensus is lacking on what constitutes the appropriate domain of job characteristics that generate or reflect the dimensions of jobs and careers. The literatures identify in excess of 100 features of jobs (perhaps 15-30 major ones) and problems of conceptualization and data reduction must not be underestimated. Second, the studies uniformly show that jobs are constellations of modestly to highly correlated characteristics, creating the estimation problems that accompany the separation of colinear effects. The presence of constellations of job features emphasizes the need for stronger theoretical and measurement models that speak to the question of what it is about jobs that is important and why. Finally, the accumulated literature discourages the notion that there is a single dimensionalization, or a single theoretical statement,

or a single measurement model of jobs and their social organization that will fit all substantive problems at a disaggregated level of analysis. Rather, at least in the near term, our theories and measurement models for career and job dimensions will probably be most effective if they are tailored to more narrowly defined classes of substantive problems such as those dealing with structural and labor market forces operating on jobs, or those dealing with such individual perceptions of jobs as job satisfaction and aspirations. This seems to be a reasonable strategy until we have a better understanding of the dimensions and social organization of jobs and careers for sociologically similar questions. Then we may have achieved the leverage needed to address larger forms of synthesis.

C) EXPLANATIONS FOR CAREER PHENOMENA

In the past the study of structural and individual level explanations for achievement outcomes has been largely segregated into different camps of scholars. Structural factors received most attention from Marxist and dual, multiple, and segmented labor market economists. Individual factors (socioeconomic background, ability, and skills) were studied most extensively by human capital economists, the status attainment tradition in sociology, and the fields of vocational and personnel psychology. More recently these traditions show evidence of convergence (Wright and Perrone, 1977; Robinson and Kelley, 1977; Stolzenberg, 1975; 1978; Sorensen, 1977; Beck, Horan and Tolbert, 1978; see Kalleberg and Sorensen, forthcoming, for a review).

The concept of career lines provides a useful vehicle for merging the two traditions still further. Thus, Spilerman (1977:586) notes that career lines " . . . constitute an intermediary structure, relating the behaviors and life chances of individuals to "macro" organizational units, thereby linking two important levels in sociological analysis." Career lines, empirically linked job sequences, are shaped and formed by institutional features. Career lines are a structural feature of the labor market. Individuals, then, pursuing their own careers through sequences of jobs, follow identifiable sequences of jobs in the labor

force with empirical regularity. These sequences constitute career lines. The rate at which individuals move through career lines, that is normatively faster or slower in age terms, undoubtedly varies with both individual factors (ability, credentialing, on-the-job acquisition of skills and experience) and structural forces (the rate of growth of the occupational structure and hence opportunity structure, see Sorensen, 1977; the size of contiguous birth cohorts competing for similar positions, or the vacancy rate in firms and families of industries, White, 1970). Thus, the study of career lines embraces an analysis of the differential impact of person level explanations within a differentiated opportunity structure.

A promising line of structural investigation originates in the sociology of labor markets (Kalleberg and Sorensen, forthcoming). Dual and segmented labor market perspectives emphasize the division of the occupational structure into two or more noncompeting groups, primary and secondary (also, core and periphery; monopoly, competitive and state sectors). Formed and patterned by custom and institutional arrangement, it is argued that the primary sector provides high paying jobs with opportunities for advancement, employment stability, and good working conditions. Secondary sector jobs, by comparison, involve few investments by firms in work skills and on-the-job training, involve much more competition for employment, carry higher turnover, employment

insecurity, and poorer working conditions. More important for our purposes, many of the jobs in the primary sector are linked together, which provides a necessary condition for certain types of career lines (see Doeringer and Piore, 1971; Piore, 1975). Althauser and Kalleberg (1977) have carefully defined a typology of five labor markets, designed to overcome some of the tautologies and definitional problems of the past. Their irreducible structural definition of an internal labor market includes two components, entry ports and job ladders (Althauser and Kalleberg, 1977:6). Entry ports refer to entry level jobs that provide access to the job ladders that are filled from a labor market external to a given internal labor market. Job ladders are job clusters within which employees may be upgraded or downgraded as they move between jobs.

Career line analysis provides a conceptual and measurement device for testing and informing the validity of dual and segmented labor market predictions. To our knowledge, this central tenet of the dual labor market literature--the hypothesis of qualitatively different job ladders and ports of entry--has not been thoroughly tested for a comprehensive population or for a highly disaggregated set of jobs. Are career lines in fact organized in two homogeneous groups? Alternately, to what degree is there within market heterogeneity in career lines (i.e., transition probabilities, ports of entry and job characteristics

associated with career lines)? Are there career lines that bridge the internal and external labor markets? Dual labor market theory suggests answers to these questions, yet the state of the evidence is unsystematic and largely specific to studies of single firms, industries or occupational arenas (see Kalleberg and Sorensen, forthcoming, for a review). Our own work in progress will hopefully advance the present state of answers to these questions.

Additionally, the literature on labor markets offers a rich source of theoretical ideas on how structural sources of variation in the American occupational structure generate and maintain patterns of job stability and movement. Career lines offer an intermediary theoretical and analytic framework within which these macro and micro levels of analysis may be usefully combined.

Our perspective on the determinants of career lines is further informed by the accumulating theoretical and methodological literature on life course analysis (e.g., Winsborough, 1975; Elder, 1975; Hogan, 1976). Baltes (1973:457) observes that "... the theoretical and empirical rationale for a life-span view of human development is still vague, and, perhaps misunderstood," and the literature reveals little consensus of conceptualization, approach, and focus such that a coherent conceptual

framework is lacking. Despite these limitations, however, the literature does suggest promising "lines of analysis" (Elder, 1975:167) if not promising theory and methods of analysis.

The life course perspective stresses the multiple, concurrent, and interlocking role sequences in which specific social transitions, including job changes, are embedded. Not only does the individual occupy a plurality of roles, but the role expectations often compete (Spencer and Featherman, 1978:409). In negotiating transitions the individual adapts to contingencies. Four major life-course dimensions structure the complex interdependencies within which individuals adapt: family, school, work, and (possibly) the military. We think these dimensions are usefully conceptualized not as separate analytical spheres, but as complex interrelationships with calculable career consequences (see reviews by Elder, 1975, and Sweet, 1977). More specifically, each life course dimension hosts a variety of identifiable activities and transitions. The timing and synchronization of these events involve problems of coordination, resource management, and adaptation for the individual (Elder, 1975); and the many possible permutations in the timing and ordering of events within and between life course dimensions has received particular attention (Sweet, 1977). Thus, for example, there is a literature emphasizing the detrimental effects of asynchronies (Bartz and Nye, 1970; Bumpass and Sweet, 1972;

Hogan, 1976; Call and Otto, 1977; Otto, 1978). Moreover, with the introduction of familial considerations that affect occupational careers, life histories are joined. The development of careers becomes contingent not only upon individual life course transitions, but also upon the timing and ordering of transitions experienced by one's spouse and children. We view transitions, then, including job changes, as adaptations in a multifaceted evolution. An important problem for future research is the further development of our understanding of these transitions.

The life course perspective extends beyond the interplay of events between family, school, work, and the military--or considerations of social time as expressed in norms and role expectations-- to include individual life time or developmental age and historical time which locates the individual within a cohort. Speculation regarding the social, psychological, and biological changes attending adult development have received recent popular attention especially by the neo-Freudians (see, for example, Levinson, 1977), but the evidence is largely limited to the observation of mid-life crises or "career changes after 40" phenomenon. This literature, while suggestive, lacks conceptual and analytical rigor. Is there an age when career changes predominate? Does the "crisis" or period appear in all career lines? An additional issue is the incorporation of the effects of historical

time but this challenge exceeds the limitations of current data bases.

The problems of disentangling life stage, cohort, and period of date of measurement effects have been addressed theoretically (Elder, 1975) and analytically (Winsborough, 1975) and are not detailed here. The methodological problems in this line of research are ever present and the perspective remains more the domain of rich possibilities than of research accomplishments and knowledge (Elder, 1975). While the ideal of a theory of careers that fully embodies the wealth of these perspectives continues to exceed our grasp, the extent to which the considerations inform our understanding enhances our reach for explanations for the evolution of careers.

To summarize: we note the recent convergence in structural and person level explanations for achievement outcomes. The analysis of career lines holds great promise as an intermediate theoretical and analytical framework between macro and micro factors. In particular, the study of career lines stands to be informed by (and to inform) the growing literature on the sociology of labor markets. Finally, we briefly summarized several lines of development from recent studies of life course dimensions and transitions. While the area is less well developed and many of the issues less clear, we reasoned that a complete

understanding of careers is embedded in a larger set of life course dimensions and transitions.

DISCUSSION

Our task in this paper was to identify and sharpen a number of issues and questions in the study of careers. Admittedly, the discussion has been of a speculative and provisional nature. While several areas of recent work generate optimism, the research agenda before us is substantial.

We view the proposed research on career lines as a logical extension of several traditions. First, it extends work on status attainment and mobility processes. Individual attainment processes--returns to schooling, entry into the labor force, and job-based income attainment--are likely embedded in a larger context of empirical, age-graded job avenues in the labor force. Second, the study of career lines and the associated dimensions of jobs should extend our knowledge of the centrality of worklife (Kohn, 1969; Kohn and Schooler, 1973; 1978) and the changing character of work in people's lives over their life course.

Third, the analysis of career lines and career content characteristics stands to inform several central hypotheses from dual labor market theories. If the labor market is made up of qualitatively different sectors then it should be reflected in career trees and dimensions. Hopefully, our own research program will provide two tangible next steps. We plan to investigate the accuracy of the synthetic cohort strategy for measuring career lines and in turn, test the efficacy of dual labor market hypotheses about job ladders and qualitatively different career experiences for labor force sectors.

Finally, the existence and shape of mobility chains as implied by the career line concept is rich with policy implications. The enterprise of career counseling for adolescents and young adults cannot afford to exclude information on how entry jobs at one age are intricately linked to "better" or "worse" jobs at subsequent ages. Moreover, the access that women and members of minority groups have to better jobs in their 30's, 40's and 50's may in substantial measure be granted by access to career lines in the early years of labor force experience (20's).

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